

Before Commissioners: Elizabeth Anne Moler, Chair;  
Vicky A. Bailey, James J. Hoecker,  
William L. Massey, and Donald F. Santa, Jr.

California Department of Water ) Project No. 2100-054  
Resources

ORDER ON REVISED RECREATION PLAN

(Issued September 22, 1994)

On October 1, 1992, the Commission ordered the California Department of Water Resources (Cal Water Resources) to file an amended proposed recreation plan, in lieu of its previously filed plan, for its Feather River Project No. 2100, providing for additional recreational facilities and programs in the near future. 1/ Cal Water Resources filed its revised plan on June 1, 1993, and supplemental information on the plan on September 27, 1993.

The Commission will approve Cal Water Resources' recreation plan, subject to certain modifications, as described below.

BACKGROUND

The 762-megawatt Feather River Project, licensed in 1957, is located in Butte County, California, near the City of Oroville (Oroville). The project consists of the Oroville Reservoir (also "Lake Oroville"), the Thermalito Forebay, the Thermalito Afterbay, and the Thermalito Diversion, all located on the Feather River. 2/ Lake Oroville has a surface area of 15,508 acres. The Thermalito Afterbay, Thermalito Forebay, and the Thermalito Diversion have surface areas of about 4,500 acres, 600 acres, and 330 acres, respectively. The project occupies more than 9,000 acres of lands of the United States within the Plumas and Lassen National Forests.

1/ 61 FERC ¶ 61,001.

2/ The primary purpose of the project is to provide a supply of water to various municipalities, and for irrigation. Lake Oroville is the keystone of the State Water Project, a collection of storage and conveyance facilities that extend more than 600 miles from Northern California to Southern California, and provide water for nearly two-thirds of the population of California and 600,000 acres of irrigated farmland. Proposed Amended Recreation Plan for Lake Oroville State Recreation Area, filed June 1993, at p. 1.

In 1977, the Commission approved as the project's recreation plan a document entitled Bulletin No. 117-6 (Oroville Reservoir, Thermalito Forebay and Thermalito Afterbay Water Resources Recreation Report), which was generated for state purposes and provides plans for public utilization of project lands and waters for recreational purposes through the year 2017. 1/ The plan identified specific recreation areas and facilities to be provided at the project by the end of 1977, and other recreation facilities to be provided thereafter. The plan for development was based on projected recreational demand and available space at the project. 4/

In 1989, the Commission's San Francisco Regional Office informed the Director of the Division of Project Compliance and Administration of the Commission's Office of Hydropower Licensing (Division Director) that Cal Water Resources had failed to construct all of the recreation facilities in the approved recreation plan for the Feather River Project. As a result, the Division Director initiated an investigation, during which the licensee acknowledged that it did not fully implement the approved plan and asked that it be allowed to file, for Commission approval, a revised recreation plan that would supersede the approved plan. The Division Director concurred with the licensee's proposal.

The licensee filed its proposed revised recreation plan on April 20, 1990, supplemented by filings on January 23, 1991, and July 3, 1991. The revised plan did not provide for any new recreation facilities or programs in the near term, due to much lower demand than projected in the original recreation report, but provided for ongoing monitoring of needs and construction of new facilities as needed, subject to the budgetary constraints of the State of California. Interventions were filed by the Oroville Area Chamber of Commerce (Chamber of Commerce), the City of Oroville (Oroville), the Lake Oroville Fish Enhancement Committee (Enhancement Committee) and the California Sportfishing Protection Alliance (Sportfishing Alliance). Furthermore, several thousand protest and comment letters were received from local citizens, all asserting the need for improved and expanded recreational facilities at the project. The Commission's October

1/ 57 FPC 1660 at p. 1665. The procedural background to the approval of this recreation plan is set forth in the Commission's 1992 order. (See note 1, *supra*.)

4/ The facilities to be provided by the end of 1977, to accommodate an estimated 1,281,000 visitor-days, included five beaches, 595 beach parking spaces, 605 picnic units, 890 picnic parking spaces, 675 camping units, 44 primitive camping units, 6 boat launching ramps containing a total of 24 lanes, and 1,110 car and boat trailer parking spaces.

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1. 1992 order found the proposed revised recreation plan inadequate, and required the licensee to file an amended proposed recreation plan for Commission approval.

The Commission required the licensee's plan to provide additional recreational facilities and programs at the project in the near term. Specifically, the Commission required the amended plan to provide for additional campsites, picnic areas, and boating and fishing facilities, at appropriate places within the project; to consider the need for a floating campsite program at the Oroville Reservoir; to determine whether the recreation season for the Loafer Creek Recreation Area should be extended; to include a proposed fish stocking plan for the Oroville Reservoir; to include detailed drawings showing the specific type and location of the existing recreation facilities, and the additional recreation facilities contained in the amended proposed plan; and to include a schedule detailing when the additional facilities would be installed.

Furthermore, the Commission order required that the specific types and quantities of the new facilities, and the specifications of the fish stocking plan, be determined in consultation with federal, state, and local resource agencies and governmental entities, as well as interested citizen and recreation groups, including the Enhancement Committee and the Sportfishing Alliance. The plan to be submitted was to be accompanied by comments on the plan from the consulted agencies and groups, together with the licensee's response to such comments.

Finally, the Commission required that the plan provide for the biannual review of the condition and level of use of the project's recreational facilities, to determine if any additions or improvements are necessary, in coordination with the appropriate state and local resource agencies and governmental entities, and interested citizen and recreation groups. The Commission required that the plan provide for the submission of a report to the Commission describing the results of the biannual review, and any additions or improvements to the facilities proposed by the licensee, any additions recommended by the consulted agencies, and the licensee's responses to each agency recommendation. The Commission reserved the right to require modifications to the recreation plan based upon the information in the biannual reports.

#### PROPOSED RECREATION PLAN

The licensee filed its amended proposed recreation plan on June 1, 1993, and supplemented that filing on September 27, 1993.

The licensee consulted with state agencies, local resource agencies, governmental entities, and citizen groups, including the Enhancement Committee and the Sportfishing Alliance, on preparation of the proposed plan. The consultation included meetings, a public workshop, and the preparation of a draft proposed plan distributed for public review. The licensee's filing also includes a copy of the draft plan, copies of comment letters received on the draft plan, and the licensee's responses to such comments.

The 1993 proposed plan identifies additional day-use areas, overnight facilities, boat launching ramps, and floating campsites and restrooms to be provided at the project. The licensee proposes to open the campground and day-use facilities of Loafer Creek Recreation Area all year round, rather during the summer season only. "Dry camping" for self-contained recreational vehicles and day-use facilities would be available at Loafer Creek November through March, beginning in 1993.

Cal Water Resources' 1993 plan includes drawings showing the type and general location of all existing and proposed recreation facilities, and a table identifying the proposed completion date for the proposed additional facilities, with most scheduled for completion by June 30, 1994. By letter dated June 9, 1994, the licensee informed the Division Director that it has either completed the new facilities under its 1993 plan, or is in progress of completing the facilities. The following new facilities had been completed as of June 9, 1994. Asterisked facilities, although arguably recreation facilities, were not identified as facilities to be built as part of the recreation plan proposed in 1993.

- Concrete boat launching ramp at North Thermalito Forebay
- Improved road at South Thermalito Forebay
- One additional floating restroom at Lake Oroville
- New picnic tables and designated parking at Thermalito Afterbay
- Designated slalom water-ski course at Thermalito Afterbay
- One additional wildlife brood pond at Thermalito Afterbay
- Improved main entrance/exit road at Thermalito Afterbay \*
- Upgraded boat ramp at Bidwell Canyon \*

The following proposed facilities had not yet been completed:

<u>Proposed Facility</u>	<u>Expected Completion Date</u>
• Extended boat launch ramps at Spillway and Lime Saddle recreation areas	6/30/95
• Parking area, boat turnaround, and entrance road at Lime Saddle *	1995
• 3-inch potable water line and 6-inch pump sewer line across crest of	12/31/94

- dam Spillway launch ramp \*
- Two additional floating restrooms at Lake Oroville 7/1/94
- Four floating campsites at Lake Oroville 6/1/95
- Six additional floating campsites at Lake Oroville (2 each year from 1996-1998) 6/30/98
- Improved equestrian/hiking trail annually
- Equestrian group camping facilities 12/31/95
- Two additional wildlife brood ponds at Thermalito Afterbay 12/31/95
- 15 RV camping sites at North Thermalito Forebay 12/31/94
- En-route camping for RVs at North Thermalito Forebay 12/31/94
- Sewer line and pump station at North Thermalito Forebay \* 12/31/95
- Boat Storage Facility 6/30/95
- Improved restroom on crest of dam 12/31/94
- Additional lighting on crest of dam 6/30/94
- 35-mile loop mountain bike trail 12/31/95
- Designated parking area at South Thermalito Forebay 6/30/94
- Swim beach at South Thermalito Forebay 6/30/94
- Ten picnic tables and planted trees at at South Thermalito Forebay 6/30/94

In its 1993 filing, the licensee identifies certain additional recreation facilities requested by the public and governmental entities during the preparation of the plan. These facilities include fish cleaning stations, camping sites and day-use facilities at Lime Saddle and Foreman Creek, access to the diversion pool, and infrastructure development at North Thermalito Forebay, including permanent restroom facilities. The licensee does not propose deadlines for construction of these facilities in its recreation plan, but states that the proposed advisory group would determine at a later date the need and implementation priority for these and other improvements.

The licensee proposes an interim fisheries management plan, developed in cooperation with the California Department of Fish and Game (Cal Fish & Game), that specifies salmonid stocking rates and a 5-year joint study to prepare a final fishery management plan. The licensee asserts that the fish stocking plan, based partially on a work plan developed by Cal Fish & Game, would promote a multi-species warmwater and coldwater fishery, including black bass and salmonids, that would benefit a

diverse angling community. 5/ The licensee's fish stocking plan would consist of three major elements: (1) fish population data acquisition; (2) interim stocking program for salmonids; and (3) management of the warmwater fishery. 6/

Under the proposed management plan, Cal Fish & Game would use mark/recapture techniques to determine angler harvest and survival and growth rates. The licensee would conduct a monthly creel census to collect information on catches, and fish life history, and the warmwater and coldwater fisheries. 7/ The licensee would also collect routine samples of fish using conventional fish sampling methods, such as gill-nets and trawls, to provide an overall assessment of the Lake Oroville fish community, with particular emphasis on the forage base.

The licensee would use its fish population data to determine an optimum stocking rate for salmonids. The licensee states that if it becomes apparent early in the study that the initial stocking rates do not adversely affect the warmwater fishery or the forage base, it would adopt higher stocking rates for future evaluation. 8/

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- 5/ Black bass include largemouth and smallmouth bass (warmwater fish), while salmonids include salmon and trout (coldwater fish).
  - 6/ The salmonids stocked in Lake Oroville are considered resident fish, because they are not replenished by migrations up to Lake Oroville from the Pacific Ocean. They are simply planted in the lake from hatcheries and, except for those that exit the lake upriver or downriver, remain in the deeper, colder strata of the lake until they are caught by fishermen, or die of natural causes. The bass live in the upper, warmwater strata of the lake, reproduce naturally in the shallower portions of the lake, or upriver, and are also considered part of the resident fishery.
  - 7/ A creel census is a census conducted by inspecting the fish buckets (creels) of fishermen at the lake on a given day, to determine the number and type of fish being caught.
  - 8/ 60,000 yearling Chinook salmon would be stocked the first year of the study, 90,000 the second year, and 150,000 the third year. Assuming the reservoir is near maximum storage, this amounts to stocking 4, 6, and 10 yearlings per surface acre per year. Cal Fish & Game will continue to stock 50,000 to 60,000 sub-legal brown trout per year, thus bringing the total stocking rate for salmonids (Chinook salmon and trout) to 8, 10, and 14 fish per surface acre.

Cal Fish & Game has agreed to use the surplus Chinook salmon eggs from the Feather River Hatchery 2/ for the interim stocking program. The licensee would transfer the newly hatched fish to another Cal Fish & Game hatchery or to a private aquaculturalist for rearing to the appropriate stocking size. Finally, the licensee states that, if the study determines that Chinook salmon are a desirable species to stock in Lake Oroville, the licensee would expand the Feather River Hatchery by fall 1999 to increase the stock of healthy Chinook salmon for planting in Lake Oroville.

The licensee proposes to manage the warmwater fishery through lake sampling and any sampling opportunities provided by the angling organizations through fishing tournaments, etc., to provide annual estimates of growth and condition factors for the most sought-after warmwater species. The licensee would also consider habitat improvements such as riparian vegetation and Christmas tree reefs 10/ as a means of improving specific fisheries.

The licensee proposes to convene an Oroville Recreation Advisory Committee (advisory committee) consisting of representatives of the licensee, Cal Fish & Game, the California Department of Parks and Recreation (Cal Recreation), the California Department of Boating and Waterways (Cal Boating & Waterways), Oroville, Butte County, the Chamber of Commerce, the Enhancement Committee, Sportfishing Alliance, and additional interested local citizen and recreation groups. The committee is to meet twice a year to review recreational development, including the type, quantity, and location of additional facilities, operating schedules and procedures, and management and maintenance issues. Further, the licensee intends the advisory committee to determine the need for and priority of specific types of recreation facilities, and to discuss the possibility of privatization (leasing state property to concessionaires) of public recreation-related facilities, such as marinas, lodging, concessions, etc.). 11/

2/ The Feather River Hatchery is a part of the project works. 31 FPC 165, 168 (1964).

10/ Used Christmas trees thrown into the shallow portions of lakes and rivers form "reefs" that provide an attractive and healthy environment for warmwater fish.

11/ On October 14, 1980, Cal Water Resources accepted the Commission's offer to amend its license to accept a standard land-use article (Article 60 of Cal Water Resources' license), which permits a licensee to convey or lease project property, without further Commission authorization, (continued...)

Public notice of the amended proposed recreation plan was given on July 9, 1993, with comments due by September 28, 1993. Comments were filed by intervenors opposing various elements of the proposal: the Enhancement Committee, the Sportfishing Alliance, Oroville, the Chamber of Commerce, Butte County, Butte County Citizens for Fair Government (Butte County Citizens), the Butte Sailing Club, Mike Morgan, and the Citizens for Fair and Equitable Recreational Use of Lake Oroville (Citizens for Fair Use). The State Water Contractors, an organization of 27 public agency water purveyors with contracts to receive water from Cal Water Resources, filed an intervention in favor of the proposed plan. Several individual water contractors also filed comments in support of the plan: the Alameda City Flood Control and Water Conservation District, the Santa Clara Valley Water District, the Antelope Valley-East Kern Water Agency, the Desert Water Agency, San Luis Obispo City, the Dudley Ridge Water District, the Central Coast Water Authority, and the Alameda City Water District. The water contractors state that under their water contracts with the licensee, they pay for costs associated with the construction, operation, and maintenance of the project, and would be repaying the costs of the recreation facilities and programs outlined in the proposed plan to the extent those costs exceed amounts budgeted by the State of California.

Several letters from individuals state that the proposed plan is unacceptable. They propose local control of project recreation resources, adequate funding for recreation development and fishery management, improved public access for recreation, no expansion of commercial shoreline development, and consistent and adequate fish stocking.

The United Anglers of California (United Anglers), whose members are primarily bass fishermen, filed comments on the fish stocking portions of the proposed plan, supporting the planned studies and goals of the fish stocking plan, and asserting that overstocking Lake Oroville with trout and salmon (coldwater fish) could cause forage depletion and harm the warmwater (bass) fishery.

The Enhancement Committee filed petitions containing, by the Committee's estimate, approximately 13,000 signatures of local citizens. The petitions state that the licensee's proposed plan should provide for a minimum of 350,000 salmonid fish to be stocked annually in Lake Oroville to correct the problem of a depleted coldwater fishery at the lake.

11/ (...continued)  
for various purposes, including recreational purposes not inconsistent with an approved recreation plan.

The Chamber of Commerce filed 265 petitions containing approximately 4,000 signatures of individuals opposing the proposed plan. The petitions state that the licensee should honor its obligation to provide suitable recreation development at the project, and pay for construction and operation of high quality recreation and fisheries for the life of the license. Furthermore, the petitions state that the proposed plan should guarantee annual funding and provide for an adequate fishery, a local advisory committee, recreation facilities, infrastructure, privatization, and fair user fees.

Oroville, Butte County Citizens, the Chamber of Commerce, and Butte County assert that the licensee is in non-compliance with the project's recreation plan, as approved in 1977, and the Commission's October 1, 1992 order, which, according to these parties, required more new facilities than are included in the revised 1993 plan. The Sportfishing Alliance also contends the licensee is in non-compliance with the approved plan, the Commission's October 1, 1992 order, and the provisions of Section 2.7 of the Commission's regulations, 12/ and urges the Commission to take strong enforcement action.

#### DISCUSSION

Cal Water Resources has substantially carried out the requirements of the Commission order of October 1, 1992, by proposing numerous improvements in its recreation plan, and additional facilities to be constructed in the near term, in response to the history of usage and expressions of need by concerned citizens. The licensee has made efforts to improve its responsiveness to the recreation needs of the public at the Feather River Project by providing for more facilities than in its 1990 proposed plan. The comments on the 1993 revised recreation plan raise four major issues: (1) the adequacy of the existing facilities, together with the new facilities proposed in the 1993 plan, and the need for more facilities than those proposed in that plan, (2) the adequacy of the proposed 1993 fish stocking plan, (3) the need for adequate funding for construction, operation, and maintenance of existing and proposed recreation facilities, and (4) the adequacy of the authority of the proposed advisory committee. In view of these comments, we conclude that certain modifications to Cal Water Resources' plan are necessary.

12/ Section 2.7 of the Commission's regulations states the Commission's policy that all hydroelectric licensees should provide for the ultimate development of recreational resources within project boundaries consistent with the recreational needs of the area and the primary purposes of the project. 18 C.F.R. § 2.7 (1993).

#### 1. Adequacy of existing and proposed facilities and need for more facilities

Cal Water Resources states that the previously approved plan was prepared in December 1966 to evaluate recreation potential and lands needed for recreation facilities at the project, and describes the historic and recent recreation user patterns, recreation activities, and the effects of reservoir water levels on recreation use considered in developing the currently proposed plan. It concludes that demand for recreation facilities at Lake Oroville has not developed to the extent anticipated by the project's previously approved recreation plan; that recreation activities have changed to more passive and varied recreation use; and, based on user data during normal water levels, that the existing recreation facilities are generally sufficient to meet recreation demands. 13/ According to Cal Water Resources, the proposed new facilities identified in the proposed plan are intended to respond to changes in recreation activities at the project and the input of state agencies, governmental entities, and interested citizen and recreation groups. It proposes to work through the proposed advisory committee to determine the type and need for changes in the project's recreation facilities and uses to meet changing recreational demands.

Cal Water Resources' filing includes data on state-wide recreation participation for 1987 and 1992. Among other activities, the data shows an increase in participation for picnicking, swimming, use of grassy areas (games, sitting, sunning, etc.), fishing, and camping (developed tent/RV sites). Furthermore, the plan contains population growth data indicating that the population within a 100-mile radius of the project increased from about 2,000,000 in 1977 to about 3,000,000 in 1990. Total annual recreation days at the project during this period ranged from 411,000 to 939,000. In 1987, 1988, 1989, and 1990, the number of total annual recreation days was 816,000, 737,000, 780,000, and 644,000, respectively. 14/ The reduction in recreation use is attributed to the drought that resulted in a lower lake level and thus reduced attractiveness for recreation.

13/ Cal Water Resources states that since 1989, and prior to submitting its currently proposed recreation plan, it has spent more than \$2.3 million on recreation-related facilities at the project, including the extension of several boat launching ramps (needed because of lower lake levels during droughts) and improvements in wildlife habitat.

14/ A recreation day is defined as each visit by a person to a project development for recreational purposes during any portion of a 24-hour day.

In addition, Cal Water Resources' filing contains the results of user surveys conducted in 1981 and 1990. The 1990 survey asked respondents what activities they pursued at the project, and what activities, facilities, and improvements they would like at the project. The top five activities pursued were boat fishing, picnicking, swimming, boating, and beach activities. The top five facilities, activities, or improvements desired by the respondents were more fish stocking, more camping areas, kids' play areas, improved restrooms, and more shore access.

The Chamber of Commerce, the Citizens for Fair Use, and Oroville assert that the proposed plan does not provide for constructing certain facilities specified in the originally approved plan, but does not explain why those facilities are not incorporated in the currently proposed plan. They also assert that the licensee has ignored comments from local citizens, and has not provided for any significant expansion of existing facilities. The Sportfishing Alliance contends that the proposed plan does not provide for any improvements or funding for the Oroville Wildlife Area (wildlife area), which it believes is in dire need of recreational improvements and maintenance. Mike Morgan contends that the plan does not provide sufficient recreation benefits in exchange for natural resources displaced by the project, and that the licensee is not taking full responsibility for management of recreation and fish and wildlife resources. The Chamber of Commerce claims that the local business community has suffered due to poor recreation development at the project.

Oroville and Butte County contend that the proposed plan does not propose adequate additional recreation development and only proposes improvements that maintain the recreation areas' existing inadequacies. They also contend that the plan does not provide for adequate camping facilities, adequate toilet facilities at specific locations, as well as other adequate infrastructure and utility improvements. Specifically, Oroville and Butte County recommend that the following additional facilities be provided at the project:

- 15 additional floating campsites.
- Improved boat launching ramps, expanded parking facilities, additional campsites with hookups, group campsites, picnic sites, expanded beach areas (with additional parking and shower facilities), and concessionaire facilities at the Loafer Creek Recreation Area.
- Permanent toilet facilities to replace chemical toilets at the Spillway, North Thermalito Forebay, South Thermalito Forebay, and the Thermalito Afterbay (Monument Hill).

- Additional picnic tables, parking facilities, sanitary facilities, shade trees, and public viewing areas at the South Thermalito Forebay.

- A day-use beach and parking facilities at Parrish Cove, improved access road, additional parking at boat launch, campsites with full hookup, and a larger boat preparation area at the Lime Saddle Recreation Area.

- Additional public access for recreation at the Diversion Pool.

The State Water Contractors assert that the originally approved plan overestimated expected recreation demand at the project, and argue that existing recreation development is adequate to meet actual demands. They assert that the proposed plan provides a reasonable schedule for recreation development and recommend its adoption.

The project's most recent recreation report (Form 80) 15/ for the Oroville Reservoir, the Thermalito Forebay, and the Thermalito Afterbay indicates that during the 1989 calendar year, picnic areas operated at 85 percent capacity, group camps and marinas operated at 85 percent capacity, and boat launching lanes operated at 90 percent capacity.

The record and comments in this proceeding indicate a clear need and demand for certain additional facilities that should be built in the near term, but are either not provided for, or not scheduled for near-term construction, under Cal Water Resources' proposed 1993 revisions to its recreation plan. Specifically, the state-wide recreation participation study and 1990 user survey, the population of the surrounding area, the facility capacity data on the 1989 Form 80 report, and the demand for additional recreation facilities by the governmental entities, citizen groups, and the general public, all indicate the need for additional facilities at the Lime Saddle Recreation Area, the Thermalito Afterbay, and the South Thermalito Forebay. Cal Water Resources' proposed plan fails to provide for timely construction of enough additional facilities at these locations to meet those needs, in accordance with goals of the Commission's recreation policy under Section 2.7 of the Commission's regulations.

In response to public comments made on its draft plan, the licensee states that it recognizes a need for camping facilities on the north and west branches of the Feather River. The record indicates a strong public demand for camping sites at the Lime Saddle Recreation Area, on the west branch of the Feather River. Oroville and Butte County also desire campsites at this location.

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15/ See 18 C.F.R. §§ 8.11, 141.14 (1993).

We conclude that the licensee's plan must be amended to provide 25 tent/RV campsites and permanent restroom facilities in the Lime Saddle Recreation Area to adequately meet the recreation needs of the public.

In its 1993 revised proposed plan, Cal Water Resources states that in 1992, the Thermalito Afterbay contained a 2-lane boat launching ramp, portable toilets, and a 15-acre graded area for single car parking and car/trailer parking. Cal Water Resources proposes to upgrade the existing single-car parking area, designate a specific area as a water-ski slalom course, construct three wildlife brood ponds, continue security patrols, and provide 10 picnic tables and a parking area for 75 cars with trailers in the area of the site known as Monument Hill.

The Commission's October 1, 1992 order identified the Thermalito Afterbay as a specific project area to contain additional recreation facilities, such as campsites, picnic areas, boating and fishing facilities. The 1989 Form 80 shows that boat launching ramps are used at 90 percent capacity and that picnic areas are used at 85 percent capacity. In view of this situation, and the large number of parking spaces provided at the site, we conclude that Cal Water Resources should provide additional facilities beyond those proposed in its plan: an additional 2-lane boat launching ramp, permanent restroom facilities, accessible to the handicapped, and individual barbecue grills at each picnic table site.

The licensee proposes to provide additional facilities at the South Thermalito Forebay: an improved access road, designated parking, a swim beach, 10 picnic tables, and trees. According to the licensee's plan, the site currently contains a swim beach, a 4-lane boat launching ramp, portable toilets, and a 15-acre graded area for single car and car/trailer parking. Given the licensee's expansion of this area, we think that permanent restroom facilities, with handicapped access, and individual barbecue grills with each proposed picnic table, are clearly warranted, and should be installed in the near term.

Furthermore, the licensee states in its plan that fishing is a main attraction at the South Thermalito Forebay and that fish cleaning stations are one of the additional facilities recommended by interested parties. The Commission order of October 1992 specified that the additional facilities include fishing facilities. We think there is a clear need for a fish cleaning station at this site.

These additional facilities would provide for recreation development needed at the project at this time. The proposed advisory committee is expected to determine the need for any additional facilities or improvements at the project in the future. The required recreation use data should assist the

advisory committee and the Commission in determining the ability of the project's recreation facilities to meet public demand and the need for additional facilities or improvements.

## 2. Adequacy of the proposed fish stocking plan

The Enhancement Committee and the Sportfishing Alliance agree with the licensee's goal of developing a multi-species fishery in Lake Oroville. However, they do not agree with some of the specific provisions of Cal Water Resources' plan for reaching that goal. They urge that the licensee be required to implement higher stocking densities than proposed, and expand the Feather River Hatchery immediately to ensure a reliable source of salmon and trout (salmonids) for interim as well as permanent stocking.

The Enhancement Committee and the Sportfishing Alliance state that 25 years of experience and historical stocking records provide a foundation on which to determine interim stocking levels for Lake Oroville, and protest the licensee's proposal to begin stocking at low levels as if there were no history of previous stocking. They assert that salmonid plantings in 10 of the last 25 years have averaged 495,000 fish per year or 33 fish per surface acre. Both groups state that the licensee's proposed salmonid stocking levels are too low, and dispute the use of Cal Fish & Game's computer model to determine these interim stocking rates. 16/ Therefore, the Enhancement Committee and the Sportfishing Alliance recommend that the licensee be required to stock 350,000 fish or 23.4 fish per surface acre annually to sustain the Lake Oroville existing fisheries above their current levels. 17/

The Enhancement Committee and Sportfishing Alliance also recommend that the licensee begin expansion of its Feather River Hatchery at once to rear salmonids for stocking Lake Oroville. The Enhancement Committee states that, in previous years, the transportation of salmonid eggs and fry by Cal Fish & Game for growing at other nearby hatcheries has resulted in the deaths of thousands of eggs due to crowding, stress, and disease, and concludes that an expanded Feather River Hatchery would be the

16/ The licensee proposes to stock 60,000 salmonids the first year of the study, 90,000 the second year, and 150,000 the third year, subject to increased stocking levels if the results of early monitoring indicate that the warmwater fishery and forage base are not adversely affected.

17/ Oroville also indicates that it does not agree with the licensee's proposed stocking plan. The United Anglers state that they agree with the goals of the plan and the licensee's approach to achieving those goals.

most logical place to rear disease-free fish for stocking in Lake Oroville.

We will approve the licensee's proposed interim stocking rates, subject to revision on the basis of further monitoring. A fish stocking plan should be based on extensive biological research and follow-up. To formulate sound stocking recommendations, a fishery manager should have information regarding: (1) management measures (such as habitat improvement) aside from stocking that may be implemented; (2) biological characteristics of the habitat; (3) biological characteristics of the species under consideration for stocking; and (4) characteristics of fishing demands. 18/

The objections of the Enhancement Committee and Sportfishing Alliance that the proposed stocking rates are too low are not based on adequate biological information on the effects of various stocking levels at Lake Oroville. Even though there is a history of salmonid stocking, there have never been systematic measurements to establish the effects and optimum level of stocking. According to Cal Fish & Game, the lack of information on growth rates, maturation schedules, and angler exploitation, coupled with undependable egg sources and rearing problems, have resulted in a history of haphazard stocking schedules and rates at Lake Oroville. In contrast, the licensee's experimental stocking approach of collecting biological data under different stocking scenarios should produce a sound fish stocking policy that will provide quality fishing for a variety of interests. Furthermore, the United Anglers, whose members are primarily bass fishermen, support the licensee's proposal for staged and carefully monitored increases in levels of salmonid stocking, because of their concern about the possible adverse impact of salmonid populations on the bass populations.

The licensee has presented no justification for delaying the expansion of the Feather River Hatchery until 1999. The record indicates that Cal Water Resources and Cal Fish & Game have been planning to expand the hatchery for several years, and intended to expand it in 1992, but for budgetary constraints. 19/ The licensee recognizes that expansion of the Feather River Hatchery is the best means of ensuring the availability of fish eggs. Furthermore, the licensee reports that fish mortality during Cal

18/ Everhart, W.H., A.W. Eipper, and W.D. Youngs. 1975. Principles of Fishery Science. Cornell University Press.

19/ Letter of August 20, 1991, from Robert R. Rawston of Cal Fish & Game to Tom Van Gelder of the Enhancement Committee, and Cal Fish & Game memorandum of May 20, 1992, attachments D and E to Enhancement Committee's comments filed September 23, 1993.

Fish & Game's rearing process has limited the numbers of fish stocked in Lake Oroville. In 1992, Cal Fish & Game reported high mortality due to disease as juveniles and fish were trucked between different fish hatcheries. Transport of fish between hatcheries may result in increased handling stress. It is well accepted that stressed fish may be more susceptible to disease. 20/ Because fish would be subjected to lower levels of handling stress if reared in one facility, expansion of the Feather River Hatchery should result in an lower rate of fish mortality.

However, upon issuance of this order, the licensee would begin stocking Chinook salmon and brown trout as part of its interim stocking program. Therefore, the licensee should initiate expansion of its Feather River Hatchery within one year, and complete the expansion within five years, to accommodate the increasing numbers of salmonids that would be stocked in Lake Oroville over the next three to five years, and to decrease fish mortality due to transportation stress. Within 120 days of the issuance of this order, the licensee must file, for Commission approval, plans for expansion of the Feather River Hatchery. The plan must include design specifications for facilities necessary to rear salmonids from eggs to juveniles for stocking in Lake Oroville. The plan must also include a construction schedule and cost estimates, and be accompanied by the comments of Cal Fish & Game, the U.S. Fish and Wildlife Service, the United Anglers, the Enhancement Committee, and the Sportfishing Alliance. 21/ The Commission will reserve the right to modify the licensee's plan and schedule.

The licensee states that it would consider habitat improvements to enhance the warmwater fishery, but it does not provide any specific information regarding the implementation of this aspect of the plan. Therefore, within 90 days of the date of this order, the licensee must file, for Commission approval, a plan for fish habitat improvements in Lake Oroville. The plan must include specific measures for habitat improvements and a schedule for implementation. The plan should also be accompanied by the comments of Cal Fish & Game, the U.S. Fish and Wildlife Service, the United Anglers, the Enhancement Committee, and the Sportfishing Alliance.

20/ Ellis, A.E. 1981. Stress and the modulation of defense mechanisms in fish. Pages 147-170 in A.D. Pickering, editor. Stress and Fish. Academic Press. London.

21/ In the August 20, 1991 letter cited in note 19, *supra*, Cal Fish & Game stated that hatchery expansion would cost about \$1.7 million.



The licensee must file annual reports on its fish stocking efforts and fish habitat improvements at Lake Oroville to enable the Commission to monitor the licensee's progress in implementing the fish stocking program. The reports must be filed by December 31 of each year, beginning in 1994, and continue on an annual basis until 1998. The 1998 report must include the licensee's recommendations for a final stocking rate, based on information from its studies of Lake Oroville. All reports must include the comments of the state and federal resources agencies and recreational groups.

3. Need for funding for construction, operation, and maintenance of existing and proposed recreation facilities

Many of the commenters contend that the proposed plan does not provide for guaranteed annual funding for the construction, operation, and maintenance of recreation facilities through the license term. The Sportfishing Alliance contends that the licensee is responsible for funding the wildlife area and urges the Commission to investigate whether the licensee is funding the maintenance and development of the wildlife area and Cal Fish & Game staffing of the site. The Butte County Citizens propose a specific funding method that involves requiring the end users of water supplied by the Oroville reservoir to pay \$2.00 per month to support recreation construction, operation, and maintenance at the project.

In its proposed plan, the licensee acknowledges that it bears the ultimate responsibility for ensuring the funding, development, and management of current and future recreation facilities at the project. The licensee states that it intends to explore and utilize a number of funding mechanisms, including cooperation with other state agencies, the potential for bond sales, and expanded use of concessionaires. Furthermore, the licensee states that it will obtain funding from all appropriate sources for improvements that it adopts based on recommendations of the advisory committee. According to Cal Water Resources, funding for these improvements would be sought and carried out in cooperation with other state agencies and in a manner consistent with state law. Furthermore, as stated above, the State Water Contractors state that their contracts for water supply from the project obligate them to pay for all costs of the project, including costs of carrying out the recreation plan. Accordingly, it appears that users of the water from the project would be required to pay higher water rates to make up any deficit in the licensee's recreation budget.

It is the Commission's policy that licensees encourage governmental agencies and private interests, such as operators of user-fee facilities, to assist in carrying out plans for public recreation, including operation and adequate maintenance of

recreational areas and facilities. 22/ Accordingly, the licensee may solicit funding or services from Cal Recreation, Cal Fish & Game, Cal Boating and Waterways, and other entities for the construction, operation, and maintenance of the project's recreation facilities. However, as Cal Water Resources acknowledges, the project licensee is ultimately responsible for the construction, operation, and maintenance of all required recreation facilities and recreation areas, and for the implementation of the recreation plan we are approving.

Recreational development at the Feather River Project is a significant beneficial public use that the licensee must foster as a price of harnessing the hydroelectric potential of a national water resource. 23/ The policy of the Commission is to optimize the development of recreation at a project, taking into account, among other things, the project's economics. 24/ Because Cal Water Resources uses the power generated from this project to operate the downstream pumps of the State Water Project, it does not realize a cash flow from the sale of electricity. 25/ Nevertheless, it realizes significant savings from not having to purchase the power necessary to operate the pumps from other sources. 26/ There is no need

22/ 18 C.F.R. § 2.7.

23/ A resident of the project area states that the Feather River Valley was dramatically altered by the construction and operation of the hydroelectric project -- that farms, mines, homes, schools, roads and trails of "a golden historical past" were inundated -- and that the licensee promised extensive recreational developments to compensate for this loss. Motion to intervene by Mike Morgan, filed September 28, 1993, at p. 3.

24/ 18 C.F.R. § 2.7 (1993).

25/ Cal Water Resources' Proposed Amended Recreation Plan, filed June 1993, at p. 29.

26/ If Cal Water Resources had purchased the 846.3 million kWh it generated at its Edward Hyatt (Oroville Dam) plant in 1992 from Pacific Gas & Electric (PG&E) at PG&E's fixed charge rate of 18.47 mills per kWh (according to PG&E's FERC Form 1 filing for 1992), it would have paid \$15.6 million. Since Cal Water Resources' total cost of service for the Feather River Project in 1992 was approximately \$9.3 million (according to its December 1993 application for partial exemption from annual charges), the licensee apparently saved more than \$6 million from its operation of this project. By not having to purchase the nearly 2.6 billion

(continued...)

for the Commission to become involved in the details of how Cal Water Resources arranges for the funding of its recreation plan. 27/ As we stated above, we encourage licensees to consider a wide range of funding options. However, Cal Water Resources is ultimately responsible for arranging the funding. We do not believe that the cost of the additional facilities that we have found necessary for an adequate recreation plan, or the accelerated schedule for expanding the Feather River Hatchery, will entail any unreasonable costs, given the magnitude of the economic benefits the licensee realizes from this project.

#### 4. Adequacy of proposed advisory committee

The Commission's October 1, 1992 order required that the proposed plan include provisions for the review of the condition and level of use of the project's recreation facilities every two years, to determine if any additions or improvements are necessary. Further, the plan had to provide for the submission of a report to the Commission describing the results of the required biannual review. The report was to include any additions or improvements to the project's recreation facilities proposed by the licensee, any additions or improvements recommended by the consulted parties, and the licensee's responses to each party's recommendation.

In its proposed plan, Cal Water Resources proposes to establish an advisory committee consisting of representatives the licensee, Cal Fish & Game, Cal Recreation, Cal Boating and Waters, Oroville, Butte County, the Chamber of Commerce, the Enhancement Committee, the Sportfishing Alliance, and any additional interested local citizen and recreation groups. The committee is to meet twice each year to review recreational

#### 26/ (...continued)

kWh it generated in 1993 (a more typical year), the licensee saved approximately \$38.5 million. If Cal Water Resources' alternative supplier were Southern California Edison, with a fixed charge rate of 17.2 mills per kWh in 1992, the savings realized from operation of this project would have been approximately \$5 million in 1992, and \$35 million in 1993.

27/ The licensee has not yet provided us estimates of the costs of the new facilities it has installed or plans to install at the project. However, our staff estimates such facilities, other than the fish hatchery expansion, will cost from between \$1 to \$2 million. The staff also estimates that the additional facilities needed at the project, but not included in the plan for construction in the near term, will cost less than \$800,000. Expansion of the fish hatchery sooner than proposed should not affect its estimated cost of \$1.7 million.

development, including the type, quantity, and location of additional facilities, operating schedules and procedures, and management and maintenance issues.

Oroville, Butte County Citizens, Butte County, the Chamber of Commerce, and the Citizens for Fair Use contend that the proposed advisory committee does not include membership of all affected groups, including local input. Furthermore, Oroville, Butte County, and the Enhancement Committee contend that the proposed committee does not have adequate support services or procedures for carrying out committee recommendations for future recreation improvements and facilities. Butte County recommends that the committee membership include Oroville, Butte County, the Chamber of Commerce, each intervenor in this proceeding, and the licensee, with Cal Fish & Game and Cal Recreation acting as advisors to the committee. Butte County also recommends that the advisory committee conduct an annual review of the licensee's proposed budget for recreation construction, operation, and maintenance, and that any proposals for additional facilities or modification of facilities by the advisory committee be submitted by the licensee to the Commission for approval, along with the licensee's comments on any such committee proposals. The Commission would resolve disagreements between the licensee and the committee. Finally, Butte County recommends that the advisory committee meet semiannually or more frequently, if called by two or more members, and that agendas for the meetings be prepared and distributed to members at least 30 days prior to the meetings.

The advisory committee should have representatives from all the interested groups. In addition to the specific members identified by the licensee, the committee should include representatives of the Butte County Citizens, the Butte Sailing Club, the Citizens for Fair Use, and the State Water Contractors. The licensee must monitor the use and capacity of each type of recreation facility within each project area in order to provide the advisory committee, and the Commission, with data to complete a review of the recreation plan. Therefore, Cal Water Resources must collect data on the number of monthly and annual recreation days for each project recreation area, and the percent of the total facility capacity that each type of recreation facility is used each month. The data must differentiate between weekday and weekend use and capacity. This data must be made available to the advisory committee and included in reports to the Commission every two years.

On or before November 1, 1996, and every two years thereafter, the licensee shall file a report with the Commission. The report should document the results of each individual advisory committee meeting, and include a description of any additions or improvements to the project's recreation facilities proposed by the advisory committee and proposed by the licensee,

the licensee's responses to each advisory committee recommendation resulting from the meetings, comments from each advisory committee member on the licensee's report, the licensee's responses to such comments, and the required use and capacity data for the project's recreation facilities. The licensee must allow a minimum of 30 days for each advisory committee member to comment on the report. If any member does not respond, the licensee shall include in its filing a copy of its request letter. Based on the information contained in the report, the Commission may require modifications to the project's recreation plan, including requiring the licensee to provide improvements or additions to the project's recreation facilities.

#### Other Issues

Cal Water Resources' filing does not provide details and drawings of the design and features of certain proposed facilities. 28/ The licensee must supplement its proposed plan to provide such information, and specific details regarding all of the additional facilities required in this order, including the specific type, design, location, construction materials and methods, and installation schedule for the facilities. In addition, Cal Water Resources should describe how the wildlife area is operated and maintained for its intended purposes. Finally, Cal Water Resources should identify the type, size, and location of all existing and proposed toilet facilities, including those additional restrooms required by this order, and describe how the proposed facilities have been or will be designed to be handicapped accessible in accordance with the provisions of Section 2.7(b) of the Commission's regulations.

- 28/ Specifically, the licensee does not identify the number of units, the features, and the location of the proposed equestrian group camp; the size, design, configuration, protective barriers, and maintenance of the swim beach at South Thermalito Forebay; the number of units of the floating restrooms; the size and features of the floating campsites; the alignment, use restrictions, and surface material of the mountain bike trail; the features of the boat storage facility; the type of improvements and surface materials of upgraded roads and parking areas; the number of units and type of restroom facilities at the Oroville dam; the specific features and location of the 15 "en-route" RV camping sites; the size, configuration, design, and maintenance of the wildlife brood ponds; and the type, number, and location of the trees to be planted at the South Thermalito Forebay. Nor does the proposed plan adequately describe the wildlife area or identify the specific type, quantity, or location of existing recreation facilities in that area.

The Sportfishing Alliance asks the Commission to require minimum reservoir levels to protect fish, wildlife, and recreation at the project. There is no record in this proceeding indicating whether changes in project operation to maintain the requested reservoir levels would adversely affect the primary purposes of the project, or why such a requirement is needed. Our staff may initiate an investigation to develop such a record if there are indications that maintenance of minimum reservoir levels could significantly enhance a particular project purpose.

The Sportfishing Alliance argues that the Commission, under the requirements of National Environmental Policy Act (NEPA), must prepare an EA or EIS on the proposed plan that addresses the direct, indirect, and cumulative impacts of the proposal. Specifically, the Sportfishing Alliance argues that the Commission should evaluate the potential for adverse social economic impacts to businesses and private property values in the greater Lake Oroville area of allowing the licensee to develop fewer recreation facilities under the revised 1993 recreation plan than under the plan approved in 1977. The Alliance also argues that an environmental assessment should consider the potential impacts of the licensee's failure to maintain minimum reservoir levels.

The boat launch ramps and sewer facilities are categorically excluded under our regulations from the requirement for preparation of an environmental assessment. 22/ The proposed facilities are primarily located in existing recreation areas, involve minor ground-disturbing activities, and do not affect project works or operations. Furthermore, the possible effect on the local economy or property values of permitting the licensee to build fewer recreational facilities under its revised 1993 plan does not trigger the need for an environmental assessment. 30/ nor does the failure of the licensee to propose minimum reservoir levels in connection with its revised recreation plan. Therefore, Commission action on the proposed plan does not require the preparation of an environmental document under NEPA, as prescribed under the Commission's regulations. 31/

- 22/ 18 C.F.R. § 380.4(a)(19) (1993).

- 30/ Image of Greater San Antonio, Texas v. Brown, 570 F.2d 517, 522 (5th Cir. 1978) (when the threshold requirement of a primary impact on the physical environment is missing, socio-economic effects are insufficient to trigger an agency's obligation to prepare an EIS); see also Breckinridge v. Rumsfeld, 637 F.2d 864 (6th Cir. 1976), cert. denied, 429 U.S. 1061 (1977).

- 31/ 18 C.F.R. Part 380 (1993).

The Commission orders:

(A) Cal Water Resources' proposed recreation plan, filed June 1, 1993, as supplemented on September 27, 1993, is approved, subject to the revisions and conditions described in paragraphs B through K, below.

(B) On or before January 1, 1996, the licensee must install the following additional recreation facilities at the project:

(1) Twenty-five tent/RV camping sites and permanent restroom facilities at the Lime Saddle Recreation Area.

(2) An additional 2-lane boat launching ramp, permanent restroom facilities to replace existing portable toilets, and one barbecue grill at each of the proposed picnic tables at the Thermalito Afterbay.

(3) Permanent restroom facilities to replace existing portable toilets, a fish cleaning station, and one barbecue grill at each proposed picnic table at the South Thermalito Forebay.

(C) Within 90 days from the issuance of this order, the licensee shall file specific design information for the new proposed facilities under its approved recreation plan and the additional facilities required under paragraph B above, including the specific type, design, location, construction materials and methods, and installation schedule for the facilities. Further, the filing shall include a description of how the additional facilities have been or will be designed to be accessible to the handicapped. Based on the information provided, the Commission reserves the right to require changes to the new facilities.

(D) Within 90 days from the issuance of this order, the licensee must file, for Commission approval, a detailed map of each individual project recreation area, including the Oroville Wildlife Area. The maps must identify the specific type, quantity, and location of each existing and proposed recreation facility within each recreation area. Furthermore, the filing must include, for Commission approval, a detailed description of how the wildlife area is operated and maintained for its intended purposes.

(E) Within 120 days of the issuance of this order, the licensee must file, for Commission approval, plans for expansion of the Feather River Hatchery, and initiate the expansion within one year and complete the expansion within five years of the date the Commission approves the plans. The plan must include design specifications for facilities necessary to rear salmonids from eggs to juveniles for stocking in Lake Oroville. The plan must also include a construction schedule, cost estimates, and the

comments of Cal Fish & Game, the U.S. Fish and Wildlife Service, United Anglers, the Enhancement Committee, and the Sportfishing Alliance. The Commission reserves the right to modify the licensee's plan and schedule.

(F) Within 90 days of the date of this order, the licensee must file, for Commission approval, a plan for fish habitat improvements in Lake Oroville. The plan must include specific measures for habitat improvements and a schedule for implementation. The plan must be accompanied by the comments of Cal Fish & Game, the U.S. Fish and Wildlife Service, the United Anglers, the Enhancement Committee, and the Sportfishing Alliance.

(G) The licensee must file annual reports on its fish stocking efforts and fish habitat improvements at Lake Oroville. The reports must be filed by December 31 of each year, beginning in 1994, and continue on an annual basis until 1998. The 1998 report must include the licensee's recommendations, for Commission approval, for a final stocking rate based on information from its studies of Lake Oroville. All such reports must include the comments of Cal Fish & Game, the U.S. Fish and Wildlife Service, the United Anglers, the Enhancement Committee, and the Sportfishing Alliance. The Commission reserves the right to modify the licensee's recommendations.

(H) Cal Water Resources must establish a recreation advisory committee consisting of one representative from each of the following: Cal Fish & Game, Cal Recreation, Cal Boating and Waters, Oroville, Butte County, the Chamber of Commerce, the Sportfishing Alliance, the Enhancement Committee, Butte County Citizens, the Butte Sailing Club, Citizens for Fair Use, the State Water Contractors, and the licensee.

(I) The committee shall review the project's existing recreational facilities and use, and determine the need for any additions or improvements, including the type, quantity, location, and installation schedule of additional facilities. The licensee must make available to the advisory committee the recreation data required paragraph J below. Furthermore, the committee may discuss, as appropriate, operating schedules and procedures, and management and maintenance issues, and the need for changes to such practices.

(J) Beginning on January 1, 1995, the licensee must collect data on the number of monthly and annual recreation days for each project recreation area and the percent of the total capacity that each type of recreation facility is used each month. The data must differentiate between weekday and weekend use and capacity and be collected through the license term.

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(K) On or before November 1, 1996, and every two years thereafter, the licensee must file a report with the Commission, providing the recreation data required paragraph J, above, for the two-year period preceding the filing date of the report. The report must also document the results of each advisory committee meeting during the two-year period preceding the filing date of the report, and include the following: (1) a description of any additions or improvements to the project's recreation facilities proposed by the advisory committee; (2) the licensee's responses to each advisory committee recommendation, including any proposed additions or improvements; (3) comments from each advisory committee member on a draft of the report; and (4) the licensee's responses to any comments received on the draft report. The licensee must allow a minimum of 30 days for each advisory committee member to comment on the report. If any member does not respond, the licensee must include in its filing a copy of its request letter. Based on the information contained in the report, the Commission may require modifications to the project's recreation plan, including requiring additions or improvements to the project's recreation facilities.

By the Commission.

( S E A L )

*Lois D. Cashell*  
Lois D. Cashell,  
Secretary.